

Message

---

**From:** Glenn, Trey [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C1F10FEC3149420597E6581C2586E25E-GLENN, ONIS]  
**Sent:** 11/11/2018 2:12:55 PM  
**To:** Jenkins, Brandi [Jenkins.Brandi@epa.gov]; Ashbee, Blake [ashbee.blake@epa.gov]; Walker, Mary [walker.mary@epa.gov]; Allenbach, Becky [Allenbach.Beky@epa.gov]; Zapata, Cesar [Zapata.Cesar@epa.gov]  
**CC:** Gettle, Jeaneanne [Gettle.Jeaneanne@epa.gov]; Palmer, Leif [Palmer.Leif@epa.gov]  
**Subject:** For 10 years, a chemical not EPA approved was in their drinking water - CNN

Do we have a desk statement on this?

Can someone update me on the status of our actions related to this issue?

Thanks, Trey

<https://www-m.cnn.com/2018/11/11/health/denmark-sc-water-chemical-not-epa-approved/index.html?r=https%3A%2F%2Fwww.cnn.com%2F>

## For 10 years, a chemical not EPA approved was in their drinking water By Sara Ganim, CNN Updated at 8:52 AM ET, Sun November 11, 2018

(CNN) — For 10 years, some residents in Denmark, South Carolina, have been suspicious of the rust-colored water coming from their taps. They've been collecting samples in jars and using bottled or spring water, even though the local and state government assured them it was safe.

But through a Freedom of Information Act request and a one-year investigation, CNN has found new information that may cast doubts on those assurances.

The state government was adding a substance to one of the city's four wells, trying to regulate naturally occurring iron bacteria that can leave red stains or rust-like deposits in the water. The substance, known as HaloSan, was not approved by the US Environmental Protection Agency to disinfect drinking water.

The city's mayor says that all of the city's wells flow into one system to be distributed throughout the city.

The EPA and the state of South Carolina have confirmed to CNN that there is now an open investigation into how this happened, although neither would comment on the target of the probe or the scope.

It's unclear what the effects of HaloSan might have been on the almost 3,000 people who live in this rural, tight-knit community, but a group of about 40 residents believe the water is to blame for illnesses and maladies they say they're suffering from.

The chemical is typically used as a disinfectant for pools and spas, but several experts contacted by CNN said they could not find another instance where it was added to a drinking water system.

One thing is clear -- the state of South Carolina approved its use, and it should not have. It was used for 10 years.

CNN was told by the state that it has been adding HaloSan to the water in Denmark since 2008.

A spokesman for South Carolina's Department of Health and Environmental Control told CNN in an email that it believed HaloSan was EPA-approved for drinking water based on the way the system was "advertised."

"The Berry Systems HaloSan treatment unit had been advertised as an effective treatment in the control of iron bacteria and was certified ... " said Tommy Crosby, director of media relations for the South Carolina Department of Health and Environmental Control.

Berry Systems, the makers of HaloSan, has not responded to multiple phone calls and emails by CNN requesting comment.

"It was our thinking that it was an approved chemical to be used," said Gerald Wright, mayor of Denmark, South Carolina. "We rely totally on DHEC because they have the responsibility and expertise to test, monitor and advise."

An EPA spokesperson tells CNN that HaloSan is not approved to be used to treat drinking water.

"HaloSan has not undergone the necessary evaluations as part of the pesticide registration process and, therefore, EPA cannot confirm the safe use of this product for the disinfection of drinking water," according to the EPA.

An EPA risk assessment from 2007 shows that HaloSan can be a "significant eye and skin irritant." Other effects can include "burning, rash, itching, skin discoloration/redness,

blistering, allergic type reactions including hives/welts, allergic contact dermatitis, and bleeding also have been reported. ... Eye pain and swelling of eyes also has been reported in some incidences."

Disinfectants fall under the EPA pesticide program.

The EPA told CNN that HaloSan is not a registered pesticide product and has not been reviewed by EPA's pesticide program. By law, "a product intended to be used to disinfect drinking water must be registered by the Environmental Protection Agency," and have scientific data that demonstrates that the product "can perform its intended function without undue harm to people or the environment."

An April 2018 presentation by South Carolina's Department of Health and Environmental Control shows that one of Denmark's wells was treated with HaloSan.

The EPA also says that dosage must be regulated when being used for its intended purposes in pesticides. In Denmark's drinking water, it's unclear if it was regulated or filtered.

Wright tells CNN that he defers to South Carolina's DHEC.

"The Berry Systems treatment unit ... was specifically designed to treat the Cox Mill Well at the proper level," the DHEC's Crosby said. He did not say how, or if, the standard for daily monitoring was met.

Marc Edwards, a Virginia Tech engineer and researcher who first learned of HaloSan's usage in a sampling report about Denmark, said he was "dumbfounded" when he saw it was being added to one of Denmark's wells.

"I did a thorough search, and I've never seen it approved for a public water supply before," he said. "And the EPA approvals that I saw, none of them were for municipal potable water."

In addition, Edwards noted that he sees no evidence in any reports that the dosage was being regulated.

"You have to make sure you don't put too much of it in the water. And there was no way that they could prove that they weren't exceeding the recommended dose," he said. "There's a maximum allowed amount, even for industrial applications. And they have no way of proving that, that level is not being exceeded."

Wilma Subra, a chemist and environmental health scientist, told CNN that HaloSan appears to be sold with a kit that regulates dosage. The state Department of Health and

Environmental Control says it required daily monitoring, "performed by the certified system operator," of "any chemical" added to the drinking water, ensuring that the maximum dosage is not exceeded.

Joe Charbonnet, science and policy associate at the Green Science Policy Institute, said without knowing the concentration levels in the water, it's hard to know the health effects. He said he is concerned about HaloSan being used as a water disinfectant because it could produce compounds that are toxic.

Like many small towns, Denmark's water bills have been rising since its population dropped, along with its revenue. Maintenance of old water lines has fallen victim, leaving pipes to rust and turn the water brown. It's unappealing to look at, even if the discolored water isn't violating the law.

A \$2 million federal grant to repair and upgrade water pipes here just wasn't enough, according to Wright, Denmark's mayor. "[O]ne grant itself is not adequate to replace all of the necessary pipes. We prioritize the ones that should be replaced first," he told CNN. "At no time have we not responded to a need that was urgent. We've done that. So what we've done is all we know we can do."

**Photos: Residents don't trust their tap water**



**Photos: Residents don't trust their tap water**

**Photos: Residents don't trust their tap water**

**Photos: Residents don't trust their tap water**

**Photos: Residents don't trust their tap water**

**Photos: Residents don't trust their tap water**

**Photos: Residents don't trust their tap water**



**Photos: Residents don't trust their tap water**

**Photos: Residents don't trust their tap water**

**Photos: Residents don't trust their tap water**

Water is a problem in thousands of towns across the United States. But in Denmark, it's not just the water pipes that are eroding -- so has trust in government officials who claimed the water was properly treated when it apparently was not.

Denmark residents Paula Brown and Eugene Smith have been calling for more government oversight since their water tested high for lead in 2010. Subsequent tests were below the legal limit for lead. But, the couple says there have been concerns about skin rashes and kidney problems among residents for years, although a link has not been made directly to the water.

Brown calls into the local radio station almost every day in an attempt to warn her neighbors that she doesn't believe the water is safe to drink.

"How can they say it's good to drink?," Smith told CNN. "I'm not gonna drink it, and I know other people drink it, but a lot of people are drinking it because they have no other choice."

The couple drives 20 miles roundtrip each month to collect local spring water in cases of gallon jugs and uses that to cook, drink and brush their teeth.

In 2016, Brown saw Virginia Tech's Edwards on television, talking about the lead crisis in Flint, Michigan. Edwards has spent nearly two decades testing water and challenging federal, state and local governments on water quality, and his work helped to reveal high levels of lead in Flint's water.

Brown picked up the phone and asked him to sample the water in Denmark, too.

Edwards took samples at 44 homes and six other locations and found lead levels were at the legal limit. It wasn't enough to sound alarm bells.

However, medical experts say there is no safe level of lead in the body.

South Carolina's DHEC tested Brown and Smith's home in 2010, and found about twice the legal level of lead in the water. When it returned to test a few months later, it found levels had dropped below the legal limit.

But, in 2011, Eugene Smith, was told by his doctor that the level of lead in his blood was high, and he should avoid his own water.

"They are not to be exposed either by ingesting nor skin exposure," reads a medical report that Smith shared with CNN.

"I was shocked," Smith said. "Because I hadn't felt like I had it in me. I got kind of upset and very angry at the time."

Documents from his doctor show his blood lead levels were elevated and he says he was diagnosed with partial kidney function. Although he can't say his health problem was caused by the water, he suspects it.

Marc Edwards and student William Rhoads in Flint, Michigan.

But Edwards says he couldn't let go of a nagging feeling that there was something missing, especially after finding red flags, like a 2010 [local newspaper story](#) where a city official declared the water had safe lead levels nine days before the testing was conducted. Wright, Denmark's mayor, later told CNN that officials were relying on 3-year-old data when talking to the newspaper because that was what was available at the time.

Skeptical of the town's transparency, Edwards decided to request to test the town's water at its source -- the drinking water wells -- for certain bacteria that might be causing some of the rashes and illness that residents described.

Wright wavered, and eventually, Edwards says he was denied access to the wells.

Wright said he had no reason to prevent Edwards from sampling. He said the state was required to do its own testing.

"I told him I thought it would be a waste of his time and resources to get the same samples," he told CNN. "I guess you have to decide if you gonna believe him or believe me."

Instead, the mayor allowed a team from the University of South Carolina to accompany state testers at the well sites, and the resulting report revealed that HaloSan was being added to the drinking water supply at one of the four wells.

After Edwards began asking questions, the state was ordered by Clemson University, which oversees pesticide registration in South Carolina, to stop adding HaloSan to the water. The well remains offline and is not in use.

"I mean it has stopped, but what the effects that did to people who been using this water through and through?" Eugene Smith said. "I'm real kind of upset. People won't know until they go get tested and find what's happened to your body. Oh my god."

### **Get CNN Health's weekly newsletter**

---

Denmark's mayor told CNN he believes he has done everything to make sure the water is safe.

"I live here," he said. "I use water every day. Drink it. Washing in it. I would be extremely foolish if I didn't make certain it was safe. I care about myself as much as anybody cares about themselves. We have not been derelict or negligent with anything related to water. Those persons complaining, you will find out they are bogus complaints. We don't have any reason at all to provide anything less than quality water."

A group of about 40 residents, including Smith and Brown, are now considering litigation, claiming they've been harmed by the water. They've hired Charleston, South Carolina, attorney John Harrell to represent them.

Harrell tells CNN one of his clients, a 12-year-old, had to have her gall bladder removed because she had 4,000 stones in it, and another 15-year-old client had so many bladder-related illnesses that she had to have her bladder removed.

"There are so many residents that have been diagnosed with kidney dysfunction. I am convinced that there is some serious contamination," he said.

South Carolina's Department of Health and Environmental Control, when asked about the potential litigation, said it would be "inappropriate" to comment.

Sent from my iPhone